

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Application No.: 10/663,845

REMARKS

Claims 1-4 are pending.

In Paragraph No. 4 of the Action, claims 1-4 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Kawamura et al (US 2004/0001947 A1).

Applicants submit that this rejection should be withdrawn because Kawamura et al. '947 is not prior art with respect to the present application.

Kawamura et al '947's effective § 102(e) date of February 27, 2003 is later in time than Applicants' priority date of September 24, 2002. To perfect their claim to priority and remove Kawamura et al. '947 as prior art against the present application, Applicants submit herewith a sworn English translation of their priority document. Section 112 support for the present claims in the priority document is as shown in the following chart:

PRESENT CLAIM	SUPPORT IN JP 2002-277339
1	Claim 1; the paragraph bridging pages 6-7; page 8, first full paragraph
2	Claim 2
3	Page 8, first full paragraph
4	Page 8, first full paragraph

In view of the above, Applicants respectfully request that the § 102(e) rejection of claims 1-4 based on Kawamura et al. '947 be withdrawn.

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Application No.: 10/663,845

In Paragraph No. 5 of the Action, claims 1-4 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Horowitz et al (US 3,998,602).

Applicants submit that this rejection should be withdrawn because Horowitz et al does not disclose or render obvious the functional surface member of the present invention. The present claims are patentable over Horowitz et al.

As recited in independent claim 1, the present invention relates to a functional surface member. The surface member includes a support having a surface to which a graft polymer chain having a nonionic polar group in the side chain thereof is bonded. A layer which includes adsorbed fine particles capable of polarly bonding to the nonionic polar group is provided on the surface. Claim 1 further recites that the nonionic polar group is a heteroaromatic group having a nitrogen atom or a sulfur atom.

Applicants respectfully disagree with the Examiner's reasoning in support of the rejection, which begins with the words "Hence, one having ordinary skill..." on page 3 of the Action.

First, there is nothing in Horowitz et al which would lead or motivate a person of ordinary skill in the art to employ N-vinyl pyridine as a polymerizable monomer in preference to or rather than all of the other monomers disclosed in Horowitz et al beginning at column 5, line 8.

Second, Horowitz et al '602 does not disclose or suggest a layer comprising "adsorbed fine particles capable of polarly bonding to the polar group," as required in present claim 1. In

AMENDMENT UNDER 37 C.F.R. § 1.116

U.S. Application No.: 10/663,845

this regard, Horowitz discloses the use of a small amount of silver ion as an initiator system for grafting a polymer onto a substrate surface. See, for example, Horowitz et al at column 6, lines 4-10. According to Horowitz, after curing, the polymerized grafted layer has “finely divided metallic silver bound in the interstices of the graft polymer layer.” See Horowitz at column 6, lines 24-27. Finely divided metallic silver bound in the interstices of a graft polymer layer is not the same as a layer having thereon adsorbed fine particles. This is a second distinction over Horowitz et al.

Next, Horowitz et al metallize the surface of the article. They state that the article to be metallized is then contacted with an electroless copper plating solution, “and the copper nucleates on the metallic silver to provide a thin continuous layer of copper which is bound to the silver atoms, which are in turn secured to the substrate by the polymeric layer.” A thin continuous layer of copper is not the same as a layer comprising adsorbed fine particles. This is yet another distinction over Horowitz et al ‘602.

Further, with regard to the finely divided metallic silver disclosed in Horowitz et al, although the size of the metallic silver is not entirely clear from Horowitz et al’s disclosure, it appears from the mechanism disclosed in Horowitz et al that the size of the metallic silver would be an atomic size, which is considerably smaller than that of the adsorbed fine particles in the present invention.

Still further, with regard to the thin continuous layer of copper disclosed in Horowitz et al, this layer is a single layer of copper and a graft polymer necessarily does not exist between copper particles in the layer, since the layer is formed by copper plating. In contrast, in the

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Application No.: 10/663,845

present invention, the graft polymer exists between, for example, copper particles (i.e., the adsorbed fine particles).

In view of the above, Applicants respectfully submit that the section 103 rejection of claims 1-4 based on Horowitz et al should be reconsidered and withdrawn.

In Paragraph No. 7 of the Action, claims 1-4 are provisionally rejected for obviousness-type double patenting as allegedly being unpatentable over claims 1-8 of co-pending Application No. 10/374,079 in view of Horowitz et al or Kang et al (US 6,334,926).

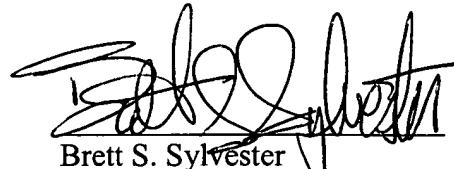
Applicants submit herewith a Terminal Disclaimer to obviate this rejection.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.116
U.S. Application No.: 10/663,845

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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